UNITED STATES PATENT AND TRADEMARK OFFICE

UNITED STATES DEPARTMENT OF COMMERCE
United States Patent and Trademark Office
Address: COMMISSIONER FOR PATENTS
P.O. Box 1450
Alexandria, Virginia 22313-1450
www.uspto.gov

APPLICATION NO.	FILING DATE	FIRST NAMED INVENTOR	ATTORNEY DOCKET NO.	CONFIRMATION NO.
09/440,624	11/16/1999	YUTAKA MAEDA	0879-0244P	3184

7590 06/16/2005

BIRCH STEWART KOLASCH & BIRCH LLP
P O BOX 747
FALLS CHURCH, VA 22040-0747

EXAMINER	
LONG, HEATHER R	

ART UNIT	PAPER NUMBER
2615	

DATE MAILED: 06/16/2005

Please find below and/or attached an Office communication concerning this application or proceeding.

Office Action Summary	Application No.	Applicant(s)	
	09/440,624	MAEDA, YUTAKA	
	Examiner	Art Unit	
	Heather R. Long	2615	

-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --

Period for Reply

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE 3 MONTH(S) FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If the period for reply specified above is less than thirty (30) days, a reply within the statutory minimum of thirty (30) days will be considered timely.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133). Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

Status

1)☒ Responsive to communication(s) filed on *07 February 2005*.

2a)☒ This action is **FINAL**. 2b)☐ This action is non-final.

3)☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

Disposition of Claims

4)☒ Claim(s) *1,2 and 16-26* is/are pending in the application.

4a) Of the above claim(s) _____ is/are withdrawn from consideration.

5)☐ Claim(s) _____ is/are allowed.

6)☒ Claim(s) *1,2 and 16-26* is/are rejected.

7)☐ Claim(s) _____ is/are objected to.

8)☐ Claim(s) _____ are subject to restriction and/or election requirement.

Application Papers

9)☐ The specification is objected to by the Examiner.

10)☒ The drawing(s) filed on *16 November 1999* is/are: a)☒ accepted or b)☐ objected to by the Examiner.

Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).

Replacement drawing sheet(s) including the correction is required if the drawing(s) is objected to. See 37 CFR 1.121(d).

11)☐ The oath or declaration is objected to by the Examiner. Note the attached Office Action or form PTO-152.

Priority under 35 U.S.C. § 119

12)☒ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).

a)☒ All b)☐ Some * c)☐ None of:

1.☒ Certified copies of the priority documents have been received.

2.☐ Certified copies of the priority documents have been received in Application No. _____.

3.☐ Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).

* See the attached detailed Office action for a list of the certified copies not received.

Attachment(s)

1) ☒ Notice of References Cited (PTO-892)
2) ☐ Notice of Draftsperson's Patent Drawing Review (PTO-948)
3) ☐ Information Disclosure Statement(s) (PTO-1449 or PTO/SB/08) Paper No(s)/Mail Date _____.
4) ☐ Interview Summary (PTO-413) Paper No(s)/Mail Date. _____.
5) ☐ Notice of Informal Patent Application (PTO-152)
6) ☐ Other: _____.

DETAILED ACTION

Response to Arguments

1. Applicant's arguments filed February 7, 2005 have been fully considered but they are not persuasive.

The Applicant argues that neither Lee et al. nor the Admitted Prior Art, taken singly or in combination disclose or teach the claimed recitations of "a changing device which automatically changes the imaging cycle of the imaging device according to the brightness of the object, thereby changing the maximum exposure period for the imaging device;" and "an image memory for temporarily storing the image signals sequentially outputted from the imaging device, the image signals in the image memory are read out with a predetermined interval and outputted to the display (page 10, lines 4-11). The Examiner respectfully disagrees. Lee et al. discloses a changing device (55: variable frame rate image capture controller) which automatically changes the imaging cycle of the imaging device according to the brightness of the object, thereby changing the maximum exposure period for the imaging device (col. 4, line 53 - col. 5, line 3; col. 5, lines 43-45); and Lee et al. also discloses a signal processor (54) for image processing. Official Notice is taken that the signal processor includes an image memory for temporarily storing the image signals sequentially outputted from the imaging device. Furthermore, Lee et al. discloses that the image signals in the image memory are read out with a predetermined interval and outputted to the display (col. 2, lines 44-51: the image data is read out at the same rate that the

image signal is captured, therefore the rate at which the image data is read out is a predetermined interval).

The Applicant also argues that the buffer, as referenced in conventional systems by Lee et al., stores fields of video data read to simply process the video data at variable frame rates, but does not output the data to a display at a constant frame rate (page 11, lines 17-19). This argument is moot in view that the claims do not state that the data be output to a display at a constant frame rate. Claim 1 only states that the image signals are read out with a predetermined interval and output to the display.

Furthermore, the Applicant argues that there is nothing described in the Related Art that discloses "a changing device which automatically changes the imaging cycle of the image device according to the brightness of the object; thereby changing the maximum exposure period for the imaging device (page 12, lines 16-19). The Examiner respectfully disagrees. Lee et al. discloses a detection device, which detects the brightness of the object (col. 4, line 67 - col. 5, line 3: it is inherent that a detection device is detecting the brightness); an imaging device (42) which captures the sequence of images and outputs the image signals for the sequence of images at a rate defined by an imaging cycle for the imaging device, the imaging cycle defining a maximum exposure period for the imaging device for the sequence of images (for example, if the maximum imaging cycle is 1/60 then the maximum exposure period would be defined as 1/60 as well; col. 2, lines 12-22; col. 3, lines 25-63); a changing device (55:

variable frame rate image capture controller) which automatically changes the imaging cycle of the imaging device according to the brightness of the object, thereby changing the maximum exposure period for the imaging device (col. 4, line 53 - col. 5, line 3; col. 5, lines 43-45).

Claim Rejections - 35 USC § 103

2. The text of those sections of Title 35, U.S. Code not included in this action can be found in a prior Office action.

3. Claims 1, 2, and 16-26 are rejected under 35 U.S.C. 103(a) as being unpatentable over Lee et al. (U.S. 6,614,477) and in view of Applicant's admitted prior art.

Regarding claim **1**, Lee et al. discloses an electronic camera, comprising: a display (it is implicit that the composite video signal will inherently go to a display); a detection device, which detects the brightness of the object (col. 4, line 67 - col. 5, line 3: it is inherent that a detection device is detecting the brightness); an imaging device (42) which captures the sequence of images and outputs the image signals for the sequence of images at a rate defined by an imaging cycle for the imaging device, the imaging cycle defining a maximum exposure period for the imaging device for the sequence of images (for example, if the maximum imaging cycle is 1/60 then the maximum exposure period would be defined as 1/60 as well; col. 2, lines 12-22; col. 3, lines 25-63); a changing device (55: variable frame rate image capture controller) which automatically

changes the imaging cycle of the imaging device according to the brightness of the object, thereby changing the maximum exposure period for the imaging device (col. 4, line 53 - col. 5, line 3; col. 5, lines 43-45); and that the image signals in the image memory are read out with a predetermined interval and outputted to the display (col. 2, lines 44-51: the image data is read out at the same rate that the image signal is captured, therefore the rate at which the image data is read out is a predetermined interval). Lee et al. also discloses a signal processor (54) for image processing. Furthermore, Official Notice is taken that the signal processor includes an image memory for temporarily storing the image signals sequentially outputted from the imaging device. Therefore, it would have been obvious to one of ordinary skill in the art at the time the invention was made to have used a signal processor to temporarily store the image signals outputted by the imaging device into a buffer before outputting to the display in order to accommodate the timing differences between the signal processor and the display). However, Lee et al. fails to disclose a controller which controls the display to display the sequence of images according to the image signals while the imaging device is capturing subsequent images, such that the display shows a live image of the captured sequence of images to enable determination of an image-capturing angle of view.

Referring to the admitted prior art, the admitted prior art teaches a display (LCD), and an electronic camera that is capable of displaying a live image on the LCD so that the LCD can be used as a viewfinder to determine the image-

capturing angle of view (page 1, lines 9-14). The controller that controls the display to display the image according to the image signals while the imaging device is capturing the live image is inherently taught.

Therefore, it would have been obvious to one of ordinary skill in the art at the time the invention was made to combine the practice of changing the imaging cycle taught by Lee et al. with the practice of displaying a live view taught by the admitted prior art to make an apparatus wherein the imaging device continually outputs an image signal to the display in the cycle and wherein the cycle may be changed in order to detect how the image quality of a desired scene changes according to the varying exposure times and imaging cycles.

Regarding claim **2**, Lee et al. in view of the admitted prior art discloses all subject matter as discussed with respect to claim 1 as well as the changing device is manually or automatically operated to change the cycle of the imaging device (Lee et al.: col. 5, lines 43-45).

Regarding claim **16**, Lee et al. in view of the admitted prior art discloses all the limitations as previously discussed with respect to claim 1 as well as disclosing that the electronic camera further comprises a signal processor for processing and temporarily storing the image signals outputted by the imaging device before outputting to the display (see claim 1 above).

Regarding claim **17**, Lee et al. in view of the admitted prior art discloses all the subject matter as discussed with claim 1, except that the electronic camera further comprises a memory card for storing select images outputted by the

imaging device. Official Notice is taken that a memory card can be used to store select images outputted by the imaging device.

Therefore, it would have been obvious to one of ordinary skill in the art at the time the invention was made to have used a memory card to store select images outputted by the imaging device in order save the images most desired by the user.

Regarding claim **18**, Lee et al. in view of the admitted prior art discloses all subject matter as discussed with respect to claim 1 as well as disclosing that the rate is a video rate (col. 2, lines 12-14), and the changing device (55) changes the video rate to enable the imaging device to output brighter images to the display (it is implicit that the longer the longer exposure period is the brighter the image will be, which in turn the display will inherently display a brighter image when the video rate is longer because the longer the video rate is the longer the exposure period can be).

Regarding claim **19**, Lee et al. in view of the admitted prior art discloses all subject matter as discussed with respect to claim 1 as well as disclosing the imaging device is a charge coupled device (CCD) (Lee et al.: reference character "42") that captures the sequence of images.

Regarding claims **20-26**, these are method claims corresponding to the apparatus claims 1, 2, and 16-19. Therefore, claims 20-26 are analyzed and rejected as previously discussed with respect to claims 1, 2, and 16-19.

Conclusion

4. Applicant's amendment necessitated the new ground(s) of rejection presented in this Office action. Accordingly, **THIS ACTION IS MADE FINAL**. See MPEP § 706.07(a). Applicant is reminded of the extension of time policy as set forth in 37 CFR 1.136(a).

A shortened statutory period for reply to this final action is set to expire THREE MONTHS from the mailing date of this action. In the event a first reply is filed within TWO MONTHS of the mailing date of this final action and the advisory action is not mailed until after the end of the THREE-MONTH shortened statutory period, then the shortened statutory period will expire on the date the advisory action is mailed, and any extension fee pursuant to 37 CFR 1.136(a) will be calculated from the mailing date of the advisory action. In no event, however, will the statutory period for reply expire later than SIX MONTHS from the date of this final action.

Any inquiry concerning this communication or earlier communications from the examiner should be directed to Heather R. Long whose telephone number is 571-272-7368. The examiner can normally be reached on Mon. - Thurs.: 7:00 am - 4:30 pm, and every other Fri.: 7:00 am - 3:30 pm.

If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, David Ometz can be reached on 571-272-7593. The fax phone number for the organization where this application or proceeding is assigned is 703-872-9306.

Information regarding the status of an application may be obtained from the Patent Application Information Retrieval (PAIR) system. Status information for published applications may be obtained from either Private PAIR or Public PAIR. Status information for unpublished applications is available through Private PAIR only. For more information about the PAIR system, see http://pair-direct.uspto.gov. Should you have questions on access to the Private PAIR system, contact the Electronic Business Center (EBC) at 866-217-9197 (toll-free).

Heather R Long
Examiner
Art Unit 2615

HRL
June 10, 2005

TUAN HO
PRIMARY EXAMINER